The Claims

1.   (Original) A multi-tiered management architecture comprising:

an application development tier at which applications are developed for execution on one or more computers;

an application operations tier at which execution of the applications is managed; and

a cluster operations tier to manage the operation of the computers without concern for what applications are executing on the one or more computers.

2.   (Original) A management architecture as recited in claim 1, wherein the cluster operations tier is responsible for securing a computer cluster boundary to prevent a plurality of other computers that are not part of the computer cluster from accessing the one or more computers in the computer cluster.

3.   (Previously presented) A management architecture as recited in claim 2, wherein the application operations tier is responsible for securing sub-boundaries within the computer cluster boundary to restrict communication between computers within the computer cluster.

4.   (Original) A management architecture as recited in claim 1, wherein the application operations tier is implemented at an application operations management console at a location remote from the one or more computers.

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5.   (Original) A management architecture as recited in claim 1, wherein the cluster operations tier is implemented at a cluster operations management console located at the same location as the one or more computers.

6.   (Original) A management architecture as recited in claim 1, wherein the application operations tier monitors execution of application processes on the one or more computers and detects failures of the application processes.

7.   (Original) A management architecture as recited in claim 1, wherein the application operations tier takes corrective action in response to a software failure on one of the computers.

8.   (Original) A management architecture as recited in claim 7, wherein the corrective action comprises re-booting the computer.

9.   (Original) A management architecture as recited in claim 7, wherein the corrective action comprises notifying an administrator of the failure.

10.   (Original) A management architecture as recited in claim 1, wherein the cluster operations tier monitors hardware operation of the one or more computers and detects failures of the hardware.

11.   (Original) A management architecture as recited in claim 1, wherein the cluster operations tier takes corrective action in response to a hardware failure of one of the computers.

12.   (Original) A management architecture as recited in claim 11, wherein the corrective action comprises re-booting the computer.

13.   (Original) A management architecture as recited in claim 11, wherein the corrective action comprises notifying a co-location facility administrator.

14.   (Original) A management architecture as recited in claim 11, wherein the one or more computers are situated in one or more clusters at a co-location facility.

15.   (Original) A co-location facility system comprising:
a plurality of node clusters each corresponding to a different customer; and
a cluster operations management console corresponding to at least one of the node clusters and configured to manage hardware operations of the at least one node cluster.

16.   (Original) A system as recited in claim 15, further comprising a different cluster operations management console corresponding to each of the plurality of node clusters.

17.   (Original) A system as recited in claim 15, wherein each of the plurality of node clusters includes, as its nodes, a plurality of server computers.

18.   (Original) A system as recited in claim 15, wherein the hardware operations include one or more of: mass storage device operation, memory device operation, and network interface operation, and processor operation.

19.   (Original) A system as recited in claim 15, wherein each of the plurality of node clusters includes a plurality of nodes configured to receive node control commands from an application operations management console located remotely from the co-location facility.

20.   (Original) A system as recited in claim 19, wherein each node in each node cluster is configured with a private key that allows the node to decrypt communications that are received, in a form encrypted using a public key, from the application operations management console associated with the customer that corresponds to the node cluster.

21. (Original) A system as recited in claim 15, further comprising a data transport medium coupled to each node in the plurality of clusters via which each node can access an external network.

22. (Original) A system as recited in claim 15, wherein the external network comprises the Internet.

23. (Original) A system as recited in claim 15, wherein each node in each node cluster is configured with the boundary of the node cluster.

24. (Original) A system as recited in claim 15, wherein each node in each node cluster is configured with a private key that allows the node to decrypt communications that are received, in a form encrypted using a public key, from the cluster operations management console.

25. (Original) A system as recited in claim 15, wherein one or more of the nodes in a node cluster are leased by the customer from an operator of the co-location facility.

26-73 (Canceled).

73. (Original) A multi-tiered computer management architecture comprising:

a first tier corresponding to an owner of a computer;

a second tier corresponding to a hardware operator that is to manage hardware operations of the computer;

a third tier corresponding to a software operator that is to manage software operations of the computer; and

a fourth tier corresponding to the owner, wherein the owner operates in the fourth tier except when revoking the rights of the hardware operator or software operator.

74.   (Original)   An architecture as recited in claim 73, wherein the second tier management is implemented at a management console at a location remote from the computer.

75.   (Original)   An architecture as recited in claim 73, wherein the third tier management is implemented at a management console at a location remote from the computer.

76.   (Previously presented)   An architecture as recited in claim 73, further comprising using a plurality of key pairs, each key pair including a private key and a public key, to securely communicate between the computer and a management device corresponding to the hardware operator, as well as between the computer and a management device corresponding to the software operator.

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